UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,213	09/26/2001	Wen-Hsiao Peng	042390.P11905	2889

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER
PHILIPPE, GIMS S

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/965,213	PENG ET AL.
	Examiner	Art Unit	
	Gims S. Philippe	2613	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 September 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-44</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-44</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

September 30, 2005 has been entered.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-27, and 34-40 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Van der Schaar et al. (US Patent no. 6788740) in view of Wu et al.

(US Patent no. 6700933).

Regarding claims 1, 12, and 23, Van der Schaar discloses a system and method

comprising the steps of quantizing coefficients into quantized values (See fig. 2, DCT

unit 214 and quantization unit 216), each quantized value having an integer part

representing a base layer and a fractional part representing enhancement layers (See

col. 6, lines 49-61), and encoding the fractional parts into an enhancement layer

bitstream (See fig. 2, items 252 and 256, and col. 8, lines 16-30).

It is noted that Van der Schaar et al. is silent about coefficients representing input

data as specified in the claims.

Wu discloses quantizing coefficients wherein the coefficients represent input data

(See Wu col. 21, lines 57-67, and col. 23, lines 3-22).

Therefore, it is considered obvious that one skilled in the art at the time of the

invention would recognize the advantage of modifying Van der Schaar's quantization

step by incorporating the teaching of Wu. The motivation for performing such a

modification in Van der Schaar is to provide an efficient layered video coding scheme

that adapts to bandwidth fluctuation and also exhibits good error recovery

characteristics as taught by Wu (See Wu col. 3, lines 27-30).

Regarding claims 6-11, and 17-22, Van der Schaar discloses a method comprising

decoding an enhancement layer bitstream into quantized fractional values

representing enhancement layers (See col. 9, lines 38-55), applying an inverse

quantization to the quantized fractional values to create coefficients representing the

enhancement layers (See inverse quantization unit 224 and residual calculator, and col.

9, lines 56-65), combining the coefficients representing the enhancement layers with

coefficients representing a base layer (See Decoded Video of from residual unit 356 of

Fig. 3, and col. 9, lines 5-37), and applying an inverse transformation to the combined

coefficients (See inverse transformation unit 354 of fig. 3, and col. 7, lines 63-66).

As per claims 34 and 39, all of the limitations of these claims have been noted in the above rejection of claims 1, 12, and 23.

As per claims 2, 13, and 23, Van der Schaar further encodes the integer part of the base layer (See col. 7, lines 39-54).

As per claims 3, 14, 25, Van der Schaar further transforms inputs into coefficients (See col. 7, lines 23-33).

As per claims 4, 15, 26, and 35-37, Van der Schaar further suggests removing temporal redundancies (See col. 3, lines 32-45).

As per claims 5, 16, 27, and 38, Van der Schaar further suggests frequency ordered enhancement layers (See col. 7, lines 4-22).

As per claim 40, Van der Schaar further adds temporal redundancies to the base layer (See col. 7, lines 43-66).

4.   Claims 28-33, and 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Bonnet et al (US Patent no. 6,510,177) in view of Wu et al. (US Patent no. 6700933).

As per claims 28, 30, 32, 41 and 43, De Bonnet et al discloses in fig. 1 a system comprising a processor (See fig. 1, processor 102); a memory coupled to the processor though a bus (See system memory 104 connected to bus 106); and a decoding process executed from the memory by the processor to cause the processor to decode an enhancement layer bitstream into quantized fractional values representing enhancement layers (See fig. Video adaptor 148, and col. 8, lines 8-12), to apply an inverse quantization to the quantized fractional values to create coefficients representing the enhancement layers (See col. 16, lines 50-56), to apply an inverse transformation to the coefficients to create the enhancement layers, and to combine the enhancement layers with a base layer (See col. 16, lines 50-55).

It is noted that De Bonnet is silent about coefficients representing input data as specified in the claims.

Wu discloses quantizing coefficients wherein the coefficients represent input data (See Wu col. 21, lines 57-67, and col. 23, lines 3-22).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying De Bonnet quantization step by incorporating the teaching of Wu. The motivation for performing such a modification in Van der Schaar is to provide an efficient layered video coding sheme that adapts to bandwidth fluctuation and also exhibits good error recovery characteristics as taught by Wu (See Wu col. 3, lines 27-30).

As per claims 29, 31, 33, 42 and 44, De Bonet further discloses adding temporal

redundancies to the base layer (See De Bonet col. 16, lines 5-37).

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Gims S. Philippe whose telephone number is (571) 272-

7336. The examiner can normally be reached on M-F (9:30-7:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dastouri S. Mehrdad can be reached on (571) 272-7418. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Gims S Philippe
Primary Examiner
Art Unit 2613

GSP

October 12, 2005